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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,776	04/16/2004	Laurene Janet Barsotti	BARSOTTI 1-1-1-2	1292
50525 7590 11/05/2007 DUFT BORNSSEN & FISHMAN, LLP 1526 SPRUCE STREET SUITE 302 BOULDER, CO 80302			EXAMINER WAI, ERIC CHARLES	
			ART UNIT 2195	PAPER NUMBER
			MAIL DATE 11/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/826,776

Applicant(s)

BARSOTTI ET AL.

Examiner

Eric C. Wai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-17 are presented for examination.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-10 are rejected because the claimed invention, appearing to be comprised of software alone without claiming associated computer hardware required for execution, is not supported by either a specific and substantial asserted utility (i.e., transformation of data) or a well established utility (i.e. a practical application).

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 5, 8, 11, 13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlson et al. (US Pat No. 6,842,898 hereinafter Carlson).

6. Regarding claim 1, Carlson teaches a computing system providing multi-threaded programming support, comprising:

a thread monitor class providing thread monitoring services to threads of a multi-threaded process (col 4 lines 46-49), the thread monitor class including:

a thread registration method to register a thread for monitoring by the class (col 5 lines 18-22, wherein threads are registered to be monitored based on criteria); and  
a thread monitoring supervisor to monitor all threads registered for monitoring operation of threads (col 4 lines 46-49).

7. Regarding claim 3, Carlson teaches that the thread monitor class further includes: a stop thread monitoring method to terminate monitoring of all threads registered for monitoring by the class (col 5 line 66 to col 6 line 3, wherein the class can kill threads).

8. Regarding claim 5, Carlson teaches that the thread registration method comprises: a thread alive check registration method invoked by a thread to register for monitoring by the class wherein the monitoring comprises periodically verifying that the invoking thread is still alive (col 5 lines 25-32).

9. Regarding claim 8, Carlson teaches that the thread monitoring supervisor is instantiated within a main thread of a multi-threaded program (col a 4 lines 46-59).

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10. Regarding claims 11 and 15, they are the method claims of claims 1 and 8 above. Therefore, they are rejected for the same reasons as claims 1 and 8 above.

11. Regarding claim 13, Carlson teaches that the step of monitoring further comprises determining whether said additional thread is still alive to monitor operability of said additional thread (col 5 lines 25-32).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2, 9-10, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al. (US Pat No. 6,842,898).

14. Regarding claim 2, Carlson does not explicitly teach that the thread monitor class further includes a thread un-registration method to remove a prior registration of a thread for monitoring by the class.

15. However it would have been obvious to one of ordinary skill in the art at the time of the invention to include a thread un-registration method. It is well known in the art that

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threads can complete their execution once their task is complete. One would be motivated by the desire to un-register a thread once that thread has completed its execution.

16. Regarding claims 9-10, Carlson does not explicitly teach that the thread monitoring supervisor is further operable to restart an inoperable thread or restart the process that includes an inoperable thread.

17. Carlson does teach methods that allow a class to recover from an error state (col 6 line 1). It would have been obvious to one of ordinary skill in the art at the time of the invention, to have modified Carlson to include that the thread monitoring supervisor is further operable to restart an inoperable thread or restart the process that includes an inoperable thread. One would be motivated by the desire to recover from the errors that resulted in the thread being inoperable as indicated by Carlson.

18. Regarding claims 16-17, they are the method claims of claims 9-10 above. Therefore, they are rejected for the same reasons as claims 9-10 above.

19. Claims 4, 6-7, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson et al. (US Pat No. 6,842,898) in view of Bowers (US Pat No. 7,051,331).

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20. Regarding claim 4, Carlson does not explicitly teach that the thread monitor class further includes: a thread HeartBeat method to signal a HeartBeat from a thread registered for monitoring by the class.

21. Bowers teaches a monitoring method, which uses a heartbeat interface to periodically indicate to whether or not a worker process is functioning improperly (col 2 lines 8-16).

22. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a thread HeartBeat method to signal a HeartBeat from a thread registered for monitoring by the class. Bowers teaches that using a Heartbeat signal has multiple advantages over the prior art (col 1 lines 28-55).

23. Regarding claims 6-7, Carlson does not explicitly teach that the thread registration method comprises: a thread poll registration method invoked by a thread to register for monitoring by the class wherein the monitoring comprises periodically verifying that the invoking thread is properly operating by invoking a poll method derived from the thread poll registration invocation wherein the thread poll registration method comprises a thread Heartbeat registration method. .

24. Bowers teaches a monitoring method, which uses a heartbeat interface to periodically indicate to whether or not a worker process is functioning improperly (col 2 lines 8-16).

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a thread HeartBeat method to signal a HeartBeat from a thread

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registered for monitoring by the class. Bowers teaches that using a Heartbeat signal has multiple advantages over the prior art (col 1 lines 28-55).

26. Regarding claims 12 and 14, they are the method claims of claims 6-7 above. Therefore, they are rejected for the same reasons as claims 6-7 above.

### ***Conclusion***

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012. The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW



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